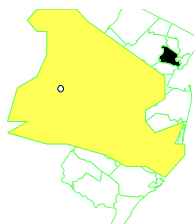


# GLEN RIDGE RADIUM SITE NEW JERSEY

EPA ID# NJD980785646



**EPA REGION 2**  
**CONGRESSIONAL DIST. 08**  
Essex County  
Glen Ridge

## Site Description

---

The 90-acre Glen Ridge Radium Site includes more than 300 residential properties. The soil at the site is contaminated with radioactive waste materials suspected to have originated from nearby radium-processing facilities that operated in the early 1900s. Subsequently, houses were constructed on or near the radium waste disposal areas. Some of the radium-contaminated soil was used as fill in the low-lying areas, and some was mixed with cement for sidewalks and foundations. This site is similar to the Montclair/West Orange Radium site, which also contains radium-contaminated soils from the same sources. Because of their proximity and the similarity of the contamination present, the Montclair/West Orange and Glen Ridge Radium sites are being addressed jointly. It is estimated that approximately 200,000 cubic yards of contaminated soil are scattered on public and private properties within portions of three communities. In 1983, the State of New Jersey identified a number of homes with high levels of radon gas and radon decay products, as well as excessive levels of indoor and outdoor gamma radiation.

**Site Responsibility:** This site is being addressed through Federal and State actions.

### **NPL LISTING HISTORY**

Proposed Date: 10/01/84  
Final Date: 02/01/85

## Threats and Contaminants

---



The soil on the site is contaminated, to varying degrees, with radioactive waste materials. When radium is located in and around a home, it may result in high levels of radon gas and gamma radiation in the home. Radon is a decay product of radium and gamma radiation is the energy released during the decay process. People who are exposed to the radium, radon, radon decay products and elevated levels of gamma radiation may be at risk. In addition, accidental ingestion of soil may cause adverse health effects.



## Cleanup Approach

---

This site has been addressed in stages: emergency actions and long-term remedial phases focusing on cleanup of the soil, structures, and groundwater. These remedial actions will permanently reduce the potential for exposure.

## Response Action Status

---



**Emergency Actions:** In 1983, the EPA installed temporary radon ventilation systems and gamma radiation shielding in 38 homes in this site and the Montclair/West Orange Radium site. In 1990 and 1991 EPA replaced the original radon ventilation system with a sub-slab depressurization system and installed 2 additional units.



**Soil and Structures:** In 1989, EPA selected a remedy to address the most severely contaminated properties, and deferred to the 1990 Record of Decision (ROD) for the selection of a remedy for the remaining less contaminated properties and contaminated public areas and streets. The selected remedy involves the excavation and off-site disposal of all radioactively contaminated soil from public and private properties, followed by restoration of the properties.

Remediation begins with an investigation of the contaminated property to determine the location, magnitude and extent of contamination. A design is then developed which details the method of excavation and restoration of the property. Remediation of a property can range from the removal of a small area to total excavation of material from the perimeter of the house and beneath the basement slab. In the most extensively contaminated properties, the homeowner must be relocated while the cleanup is in progress.



**Groundwater:** The EPA is conducting a study to determine whether contaminants from the soil have entered the groundwater. Sampling of the groundwater wells was completed in the fall of 2001. The data is currently being evaluated and a Remedial Investigation and Feasibility Study is expected to be completed this summer.

## Cleanup Progress



### Residential Properties:

The contaminated properties were categorized in phases. The most severely contaminated were remediated first, and construction activities were scheduled to minimize stress on

residential communities. The Pilot Phase and Phases I through VII have been completed. Phase VIII, involves includes the remediation of twenty residential properties, is scheduled to begin in the spring of 2002. Completion of this phase is expected in the summer of 2003. Additional investigations are underway at the Glen Ridge/Bloomfield boundary to ensure that contamination associated with this site is remediated. Another phase of remedial work is expected to begin in the spring of 2003.

**Public Properties:**

Remedial and restoration activities at Barrows Field recreational park and street roadbeds in Glen Ridge are now complete. As part of the cleanup, approximately 75,000 cubic yards of contaminated soil were excavated from the park and disposed of off-site. The park was reopened for use by the public in September 1999. The Phase VII work some roadbed remediation along the Glen Ridge/Bloomfield boundary.